

Notice of Allowability	Application No.	Applicant(s)	
	10/750,347	PERRY ET AL.	
	Examiner	Art Unit	
	Alix Elizabeth Echelmeyer	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment and remarks filed June 8, 2007.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendments and remarks filed June 8, 2007. Claims 1-5 and 11-13 have been amended. Claims 14-18 have been added. Claims 1-18 are pending.

Reasons for Allowance

2. Claims 1-18 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Applicants amended claims 1-5 and 11-13 to overcome the 112 rejection from the Office Action of March 8, 2007.

Regarding the double patenting rejections on pages 3-4, paragraphs 4 and 6 of the Office Action, Applicants have amended claims 1 and 11 to clarify the invention over US Patent 7,090,94, hereinafter '940. The amendment, stating that the bypass loop of the instant invention takes the coolant from the coolant loop *directly* to the radiator and back to the coolant loop, bypassing the heat exchanger, clarifies the bypass loop of the instant invention. Additionally, the '940 patent does not teach or render obvious a bypass loop that passes coolant *directly* to the radiator and back to the coolant loop.

As for the double patenting rejection on page 3, paragraph 5 of the Office Action, Applicants discussed in the Remarks filed the limitations of the instant invention and those of claims 6-10 of '940. Applicants have correctly stated that, while both the instant invention and '940 teach a bypass loop, the bypass loop of claims 6-10 of '940 is not

capable of passing coolant from the coolant loop *directly* to the radiator and back to the coolant loop, bypassing the heat exchanger. The bypass loop of '940, which is depicted in Figure 1 of the instant invention, can bypass both the heat exchanger and the radiator, but cannot bypass only the heat exchanger. Figure 2 of the instant invention, in comparison to Figure 1, clearly shows a bypass loop that bypasses only the heat exchanger and includes the radiator in the loop, whereas the loop of Figure 1 must bypass both.

Applicants have also amended claim 11 of the instant invention to include the clarification that the bypass loop of the instant invention takes the coolant from the coolant loop *directly* to the radiator and back to the coolant loop, bypassing the heat exchanger.

The examiner notes that claim 11 of the instant invention, which is mostly identical to claim 12 of '940 except for the limitations to the bypass loop that passes coolant *directly* to the radiator. However, limitations (c) and (d) of claim 12 of '940 are not found in claim 11 of the instant invention. Those limitations of '940 are drawn to the operation of the heat exchanger. Since the method of claim 11 of the instant invention involves bypassing the heat exchanger, it does not employ the heat exchanger. Therefore, the limitations of claim 12 of '940 would be superfluous to claim 11 of the instant invention.

Yet, the absence of those limitations in claim 11 of the instant invention effectively broadens the claim. The closest prior art of record, as listed in the references cited section of this action, does not teach the bypass loop of claim 11 of the instant

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invention. Several of the references teach loops that pass through a radiator (see, for example, Grasso (US 6,656,622) or Breault et al. (US 6,979,509)). In many of the references containing a radiator loop, such as Breault et al., the radiator loop does not link to the coolant water of the heat exchanger as taught by the instant invention.

Grasso teaches a bypass loop wherein a coolant may be directed from the fuel cell outlet to the radiator and to an accumulator, bypassing the heat exchanger. The Grasso reference does not teach the water immiscible fluid and water coolant of the instant invention.

Newly added claim 15 is narrower than allowed claim 1, since the claim contains added limitations to the bypass loop.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schrooten et al. (US 2006/0257700), which is a continuation of US 7,090,940, teaches a direct contact heat exchanger like the heat exchanger of the instant invention.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alix Elizabeth Echelmeyer whose telephone number is 571-272-1101. The examiner can normally be reached on Mon-Fri 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy N. Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alix Elizabeth Echelmeyer
Examiner
Art Unit 1745

aee


SUSY TSANG-FOSTER
PRIMARY EXAMINER